

PRELIMINARY AMENDMENT
U.S. Appln. No. 09/777,681

region utilized for the imaging of the fluorescence and a non-imaging region other than the fluorescence imaging region, wherein the non-imaging region comprises a region where the fluorescence is not received, and

the imaging control means controls such that, when signal charges are to be read from the image sensor, signal charges, which have been accumulated in at least certain pixels among pixels falling within the non-imaging region, are prevented from being read.

4 (Amended). A fluorescence imaging apparatus, comprising:

- i) excitation light irradiating means for irradiating excitation light to a measuring site, the excitation light causing the measuring site to produce fluorescence,
- ii) imaging means for imaging the fluorescence, which has been produced from the measuring site when the excitation light is irradiated to the measuring site, and
- iii) imaging control means for controlling operations of the imaging means,

— wherein the imaging means is provided with a charge transfer type of image sensor, which comprises a plurality of pixels arrayed in two-dimensional directions and which has a fluorescence imaging region utilized for the imaging of the fluorescence and a non-imaging region other than the fluorescence imaging region, wherein the non-imaging region comprises a region where the fluorescence is not received, and

the imaging control means controls such that, when signal charges are to be read from the image sensor, signal charges, which have been accumulated in pixels falling within a certain area of the non-imaging region, are read with either one of a quick reading operation, in which the signal charges are read at a reading speed higher than the reading speed for the fluorescence

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imaging region, and a binning reading operation, in which the signal charges having been accumulated in a plurality of the pixels are added together, and a total sum signal charge having been obtained from the addition is read, and signal charges, which have been accumulated in pixels falling within the other area of the non-imaging region, are prevented from being read.
